

## Inspection Report with SI&A Data

**Structure Description:** 257.87 Foot - 3 Span Steel continuous Stringer/Multi-beam or Girder

**2 District:** 06      **3 County:** Kenton      **16 Latitude:** 39°02'31.00"      **7 Longitude:** 84°34'55.00"

**7 Facility Carried:** I-75

**Milepoint:** 185.750

**6A Feature Intersected:** NS (CNO&TP) SYSTEM

**9 Location:** .5 MI SW JCT KY NBL

NBI	X
Element	X
Fracture Critical	
Underwater	
Special	

NBI CONDITION RATINGS			
<b>58 Deck:</b>	7	<b>61 Channel:</b>	N
<b>59 Superstructure:</b>	7	<b>62 Culvert:</b>	N
<b>60 Substructure:</b>	7	<b>Sufficiency Rating:</b>	98

GEOMETRIC DATA		
<b>48 Max Length Span:</b>		100.066 ft
<b>49 Structure Length:</b>		257.874 ft
<b>32 Approach Roadway:</b>		69.882 ft
<b>33 Median:</b>		(1) Open Median
<b>34 Skew:</b>		48°
<b>35 Flare:</b>		No Flare
<b>50A Curb/Sidewalk Width L:</b>		1.499 ft
<b>50B Curb/Sidewalk Width R:</b>		1.499 ft
<b>47 Horiz. Clearance:</b>		69.882 ft
<b>51 Width Curb to Curb:</b>		69.882 ft
<b>52 Width Out to Out:</b>		73.163 ft

DESIGN	
<b>Substandard:</b>	No
<b>Fracture Critical:</b>	Yes
<b>43A Main Span Material:</b>	(4) Steel Continuous
<b>43B Main Span Design:</b>	(02) Stringer / Girder
<b>45 Number of Spans Main:</b>	3
<b>44A Approach Span Material:</b>	Not Applicable
<b>44B Approach Span Design:</b>	Not Applicable
<b>46 Number of Approach Spans:</b>	0
<b>107 Deck Type:</b>	(1) Concrete-Cast-in-Place
<b>108A Wearing Surface:</b>	(1) Monolithic Concrete
<b>108B Membrane:</b>	(0) None
<b>108C Deck Protection:</b>	(1) Epoxy Coated Reinforcing
<b>Overlay Y/N:</b>	No
<b>Overlay Type:</b>	None
<b>Overlay Thickness:</b>	-1.000 in
<b>Overlay Date:</b>	

ADMINISTRATIVE		
<b>27 Year Built:</b>		1993
<b>106 Year Reconstructed:</b>		0
<b>42A Type of Service On:</b>		(1) Highway
<b>42B Type of Service Under:</b>		(2) Railroad
<b>37 Historical Significance:</b>		(5) Not Eligible
<b>21 Maintenance Responsibility:</b>		(01) State Hwy Agency
<b>22 Owner:</b>		(01) State Hwy Agency
<b>101 Parallel Structure:</b>		(R) Right of II Structure

APPRAISAL	
<b>36A Bridge Railings:</b>	(1) Meets Standards
<b>36B Transitions:</b>	(1) Meets Standards
<b>36C Approach Guardrail:</b>	(1) Meets Standards
<b>36D Approach Guardrail Ends:</b>	(1) Meets Standards
<b>71 Waterway Adequacy:</b>	(N) Not Applicable
<b>72 Approach Alignment:</b>	(9) Above Desirable Crit
<b>113 Scour Critical:</b>	(N) Not over Waterway
<b>Recommended Scour Critical:</b>	(N) Not over Waterway

CLEARANCES		
<b>10 Vert. Clearance:</b>		99.999 ft
<b>53 Min. Vert. Clearance Over:</b>		99.999 ft
<b>54A Vert. Under Reference:</b>		(R) Railroad beneath struct.
<b>54B Min. Vert. Underclearance:</b>		24.941 ft
<b>55A Lateral Under Reference:</b>		(R) Railroad beneath struct.
<b>55B Min. Lat. Underclearance R:</b>		24.278 ft
<b>56 Min. Lat. Underclearance L:</b>		0.000 ft

LOAD RATINGS	
<b>63 Operating Type:</b>	(1) Load Factor (LF)
<b>64 Operating Rating:</b>	78.0 tons
<b>65 Inventory Type:</b>	(1) Load Factor (LF)
<b>66 Inventory Rating:</b>	47.0 tons
<b>Truck Capacity Type I:</b>	tons
<b>Truck Capacity Type II:</b>	tons
<b>Truck Capacity Type III:</b>	tons
<b>Truck Capacity Type IV:</b>	tons

POSTINGS	
<b>41 Posting Status:</b>	(A) Open, No Restriction
<b>Signs Posted Cardinal:</b>	No
<b>Signs Posted Non-Cardinal:</b>	No
<b>Field Postings Gross:</b>	-1 tons
<b>Field Postings Type I:</b>	-1 tons
<b>Field Postings Type II:</b>	-1 tons
<b>Field Postings Type III:</b>	-1 tons
<b>Field Postings Type IV:</b>	-1 tons

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**12: Re Concrete Deck**

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
SQ.FT	18,867	18,802	100%	65	0%	0	0%	0	0%

Top of deck exhibits polished wheel paths with minor areas of aggregate starting to become exposed. There are small shallow spalls (without exposed reinforcement) forming at the interface of the deck and armored edges as well as on top of the back wall (deck portion) at both abutments. At the time of this routine inspection there was no significant roadway debris forming along the gutter lines of the deck.

**520: Conc Re Prot Sys**

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
SQ.FT	18,867	18,867	100%	0	0%	0	0%	0	0%

Deck has epoxy coated reinforcement. The protection system cannot be inspected, but there are no visual indications of deficiencies. For this reason, during this routine inspection the system was considered fully effective.

**1080: Delamination/Spall/Patched Area**

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
SQ.FT	65	0	0%	65	100%	0	0%	0	0%

**107: Steel Opn Girder/Beam**

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	2,838	2,838	100%	0	0%	0	0%	0	0%

The girders are in good condition with no significant deficiencies noted during this routine inspection. A moderate amount of soot from train exhaust was found on span above train tracks.

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515: Steel Protective Coating									
Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	7,982.71	7,982.71	100%	0	0%	0	0%	0	0%
The steel protective coating appears to be fully effective at the time of this routine inspection.									

205: Re Conc Column									
Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
EACH	12	12	100%	0	0%	0	0%	0	0%
No significant deficiencies were noted during this standard inspection.									

210: Re Conc Pier Wall									
Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	140	140	100%	0	0%	0	0%	0	0%
The pier walls exhibit minor vertical and diagonal cracking (less than 0.012" wide) and moderate amounts of graffiti.									

215: Re Conc Abutment									
Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	196	97	49%	88	45%	11	6%	0	0%
Typically the abutments exhibit minor deterioration with light staining and minor vertical cracking in the back walls, caps and pedestals. In addition to the typical deficiencies, Abutment 1 exhibits 5 locations of horizontal cracks with 4 of these locations (total of 36' long) having cracks up to 0.025" wide and location (11' long ) with 0.125" wide in the abutment caps. Abutment 4 exhibits 8 locations of vertical cracking, up to 0.012" wide in the cap and 44' of horizontal cracking (up to 0.02" wide) in caps.									

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1130: Cracking (RC and Other)									
Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	99	0	0%	88	89%	11	11%	0	0%

234: Re Conc Pier Cap									
Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	140	140	100%	0	0%	0	0%	0	0%
No significant deficiencies were noted during this routine inspection.									

300: Strip Seal Exp Joint									
Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	146	0	0%	118	81%	28	19%	0	0%
The joint seals exhibit signs of failure (loss of adhesion/seal) and roadway debris build up. The joints are allowing minor leakage at this time. Specifically at Abutment 1 up to 10' of seal shows signs of adhesion loss. Also at Abutment 1, the armored edge is missing (due to vehicular impact damage) for about 1'. At Abutment 4 up to 12' of seal shows sign of adhesion loss and the armored edge is damaged/missing for about 5' (due to vehicular impact damage).									

2320: Seal Adhesion									
Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	22	0	0%	0	0%	22	100%	0	0%

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2350: Debris Impaction									
Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	118	0	0%	118	100%	0	0%	0	0%

2370: Metal Deterioration or Damage									
Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	6	0	0%	0	0%	6	100%	0	0%

310: Elastomeric Bearing									
Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
EACH	44	22	50%	22	50%	0	0%	0	0%
<p>The bearings at the abutments exhibit minor to moderate lateral movement. Arm's length inspection access to the pier bearings was not attainable during this standard inspection. From the ground the bearings at piers appear to functioning properly.</p>									

2220: Alignment									
Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
EACH	22	0	0%	22	100%	0	0%	0	0%

### Inspection Report with SI&A Data

**331: Re Conc Bridge Railing**

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	516	0	0%	516	100%	0	0%	0	0%

The railings typically exhibit minor vertical cracking, minor scaling and masonry coating peeling for the entire length of bridge. The full height vertical cracks range from 0.012" to 0.025" and are at approximately 8" to 1' spacing. Due to high traffic volume the west barrier was only inspected from the east shoulder of I-75.

**1130: Cracking (RC and Other)**

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	516	0	0%	516	100%	0	0%	0	0%

**853: Utilities**

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
(EA)	1	1	100%	0	0%	0	0%	0	0%

Utility conduit is attached to east side of bridge (underside of overhang).

**857: Embankment Erosion**

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
(EA)	1	0	0%	1	100%	0	0%	0	0%

Erosion is occurring along the front faces of Abutment 4. Holes are forming, undermining the abutment.

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### STRUCTURE NOTES

Plan # 23000

Paint Date 06/10

### INSPECTION NOTES

The Standard Inspection was performed by Stantec Consulting Services, Inc. on November 16, 2015. The inspectors included Mike Lawler and Chad Evans. No specialized access equipment or lane closures were utilized for this inspection. The bridge was inventoried south to north (substructure naming convention - Abutment 1, Pier 2, Pier 3 & Abutment 4 - Beams 1 to 11, left to right facing north).

### WORK

**Action:** 1041 - Drainage-Repair Washouts / Erosion

Generated by user "mlawler" on 12/7/2015

- Repair erosion along Abutment 4 face.

**Action:** 1047 - Joints-Replace

Generated by user "mlawler" on 12/7/2015, Concur with converted work candidate.

Generated by cbresch on 11/05/2013

-Replace compression seals at both the rear and forward expansion joint locations.

-Replace armored edge material at expansion joint locations where as needed.